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2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

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Nuclear disarmament: France's practical commitment

Working paper submitted by France

> *[...] to seek a safer world for all and to create the conditions for a world without nuclear weapons, in accordance with the goals of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), in a way that promotes international stability, and based on the principle of undiminished security for all*
> (United Nations Security Council resolution 1887 (2009))

In accordance with the objectives of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) regarding nuclear disarmament and general and complete disarmament, which it has endorsed, France is actively committed to disarmament.

In order to move towards a safer world, France has adopted a practical and global approach to disarmament:

- Practical, in the sense that actions speak louder than words. France is showing the way: it has taken unprecedented unilateral measures and developed ambitious and practical measures for the vigorous pursuit of disarmament, including nuclear disarmament, at the international level.
- Global, in the sense that improving the international security situation calls for not only progress on nuclear disarmament, but also on conventional disarmament, as well as for the universalization of the prohibition of chemical and biological weapons, and the need to take into account ballistic missile proliferation and security in space.

I. Action taken by France

Cessation of production of fissile materials for nuclear weapons

Cessation of plutonium production in 1992, and of highly enriched uranium for nuclear weapons in 1996.

Respect for a moratorium on the production of fissile materials for nuclear weapons.

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France is the only State to have decided to shut down and dismantle its facilities for the production of fissile materials for nuclear weapons.

Enhancing strategic stability and building confidence

None of our weapons are targeted. This "de-targeting" measure was announced in 1997 and has been consistently reaffirmed ever since.

Reduction of the alert status of the two nuclear components announced in 1992 and 1996.

France is the first and only State to date to have made public its total number of nuclear weapons: fewer than 300. France has no nuclear weapons in reserve.

The only nuclear-weapon State, along with the United Kingdom of Great Britain and Northern Ireland, to give pre-launch notifications of all its ballistic missile and space launches, within the framework of The Hague Code of Conduct against Ballistic Missile Proliferation.

The only State to have granted international experts unfettered access to its former facilities for the production of fissile materials for nuclear weapons (visits organized in 2008 and 2009).

Definitive ban on nuclear testing

Definitive cessation of nuclear testing announced in 1996.

France was the first nuclear-weapon State, together with the United Kingdom, to have signed the Comprehensive Nuclear-Test-Ban Treaty (CTBT) in 1996 and ratified it in 1998.

The only nuclear-weapon State to have dismantled, in a transparent manner open to international scrutiny, its nuclear test site in the Pacific (the Pacific testing centre). In 1996-1998, an international mission of experts conducted a visit to the site to assess the impact of France's tests on the environment.

Support for the CTBT verification regime: France manages 24 monitoring stations.

Reduction of stockpiles to a level of strict sufficiency

As the President of the French Republic recalled in his 21 March 2008 speech in Cherbourg, France has always made sure that its nuclear stockpile is kept at the lowest possible level compatible with the strategic context, in accordance with the principle of strict sufficiency.

As a result of changes in the strategic context, in particular since the end of the cold war, all components of French forces have been scaled down: France thus cut its nuclear arsenal by half over a period of nearly 10 years.

- The ground-to-ground component: the only State to have completely dismantled its ground-to-ground nuclear component
- The naval component: the only State to have voluntarily reduced the number of its missile-launching nuclear submarines in service by one third

- The airborne component: reduction announced by the President of the French Republic in 2008 of one third of the number of nuclear weapons, missiles and aircraft in the airborne component.

II. Action taken by France in figures

- 300 nuclear warheads: this is the cap on the total number of weapons announced by the President of the French Republic on 21 March 2008. France is the only nuclear-weapon State to have made its total nuclear stockpile public.
- 50 per cent: France has reduced its nuclear arsenal by half in nearly 10 years.
- Zero: France no longer has any nuclear testing facilities or facilities producing fissile materials for nuclear weapons.

III. What France and its European partners propose

France's firm commitment to disarmament at the national level is being translated into ambitious initiatives at the international level. It would like all the nuclear powers to make a firm commitment to emulating its approach, based on a posture of strict sufficiency in nuclear arsenals.

On the basis of the proposals made by the President of France in his 21 March 2008 address in Cherbourg, France, together with its European partners, presented a disarmament plan of action which was endorsed by the European Union's 27 Heads of State and Government in December 2008, covering:

- Universal ratification of the CTBT and completion of its verification regime, and dismantling, as soon as possible, of all nuclear testing facilities, in a manner that is transparent and open to the international community
- Immediate opening, without preconditions, of negotiations on a treaty banning the production of fissile materials for nuclear weapons and observance of an immediate moratorium on the production of such materials, and the dismantling of dedicated production facilities
- Development of confidence-building and transparency measures by the nuclear Powers
- Conclusion by the United States of America and the Russian Federation of a legally binding post-START arrangement, and overall reduction of global nuclear-weapon stockpiles pursuant to article VI of the NPT, in particular by the States with the biggest arsenals
- Inclusion of tactical nuclear weapons, by those States that have them, in general arms control and disarmament processes, with a view to their reduction and elimination
- Opening of consultations on a treaty banning short- and intermediate-range ground-to-ground missiles
- Universal subscription to and implementation of The Hague Code of Conduct
- Mobilization in all other areas of disarmament.

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Responsible development of nuclear energy: initiatives by France

Working paper submitted by France

> *"France's vision is of a world that will not be divided between countries with nuclear technology, jealously guarding their privileges, and nations demanding a right to nuclear know-how that the others deny them. (...) In France's view, civil nuclear energy can be the cement of a new international solidarity, where each country will need the others to progress."*
>
> (President of the French Republic at the Paris Conference, 8 March 2010)

France attaches great importance to the development of the peaceful uses of nuclear energy, an available, cost-effective and environmentally friendly source of energy. It is fully committed to the implementation of article IV of the Treaty on the Non-Proliferation of Nuclear Weapons, and to the safe and responsible development of nuclear energy.

France believes that nuclear technologies have a vital contribution to make to the fulfilment of essential human needs and to sustainable development and should benefit all countries, in the fields of health, agriculture, industry, access to water and energy and protection of the environment.

I. France's nuclear cooperation: promoting access to nuclear energy

In the context of the drive to combat climate change and spiralling fossil fuel prices, France is willing to assist any country wishing to have access to nuclear energy for peaceful purposes which fully abides by its non-proliferation obligations.

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II. What France does: concrete actions towards the responsible development of nuclear energy

Support for the activities of the International Atomic Energy Agency in the field of peaceful nuclear applications

France actively supports the International Atomic Energy Agency's (IAEA) Technical Cooperation Programme and acknowledges its positive contribution to development. In addition to its participation in the Technical Cooperation Fund, France also supports several activities through voluntary contributions (placements for trainees, training, expert assignments and financing of major projects, particularly in the fields of cancer treatments and malaria control).

Promotion of access for all to civil nuclear energy

France has signed many bilateral cooperation agreements on the peaceful uses of nuclear energy: eight since 2008. These agreements cover all geographical areas.

Such agreements form the legal framework required for any long-term partnership and are designed to develop cooperation under the best conditions of safety, security and non-proliferation. The procedures for the transfer of materials and equipment to third parties are intended to avoid any diversion, and include a specific commitment to use for peaceful, non-explosive purposes.

In the interest of developing full bilateral cooperation, France encourages all its partners to supplement their comprehensive safeguards agreement with an additional protocol and to accede to all relevant international agreements in the field of nuclear energy (conventions in the field of nuclear safety, Convention on the Physical Protection of Nuclear Materials, convention on civil liability for nuclear damage, etc.).

France intends to develop its international cooperation in complete transparency, and in strict compliance with its international obligations. All agreements are subject to approval by the European Commission, in accordance with the terms of the European Atomic Energy Community (EURATOM) treaty, and are published once ratified.

France has set up a specialized entity, the French International Nuclear Agency, to assist countries wishing to have access to nuclear energy in establishing the infrastructure necessary for the safe development of civil nuclear energy.

Multilateral assurances of nuclear fuel supplies

France has made a commitment, in conjunction with its European partners, to the European Union's financial (up to 25 million euros) and technical contribution to the creation of a low enriched uranium bank under the auspices of IAEA. France also supported the Russian initiative related to the creation of a low enriched uranium bank. These projects are intended to give countries which fully meet their non-proliferation obligations secure fuel supplies.

Control of sensitive technologies

France considers that a clear distinction should be made between:

- The supply of reactors based on non-proliferating technologies (light water reactors) and the supply of the fuel required for their operation, which should be facilitated;
- And the export of enrichment and reprocessing technologies which, though not forbidden, must be strictly controlled owing to the sensitive nature of these technologies vis-à-vis non-proliferation commitments.

Participation in the development of nuclear technologies for the future

France considers that international cooperation is essential in the design of a new generation of safer, more competitive reactors, which will be more resistant to proliferation and generate less long-lasting radioactive waste. France participates in the Multinational Design Evaluation Programme, which aims to improve the efficiency and effectiveness of the safety evaluation procedure when reviewing new reactor designs. It plays an active part in multilateral initiatives in this field such as the Generation IV International Forum, the IAEA International Project on Innovative Nuclear Reactors and Fuel Cycles and the Global Nuclear Energy Partnership initiative. Regarding fusion technology, the International Thermonuclear Experimental Reactor (ITER) will be located at the European site of Cadarache, in France.

III. International Conference on Access to Civil Nuclear Energy (8 and 9 March 2010, Paris): practical assistance for countries wishing to undertake a nuclear power programme

France's position is that the peaceful use of nuclear power should not be confined to the handful of States that already possess the technology. At the same time, though, it is essential — both for the countries concerned and for the international community as a whole — for any country undertaking a civil nuclear programme to be capable of meeting the highest standards regarding safety, security, non-proliferation and protection of the environment for future generations.

On the initiative of the President of the French Republic, the International Conference on Access to Civil Nuclear Energy was held in Paris on 8 and 9 March 2010 in coordination with IAEA and with the support of the Organization for Economic Cooperation and Development, attended by all those with a stake in the responsible development of civil nuclear energy:

- 63 States, represented mainly at the ministerial level, showing the importance of a commitment at the highest level to setting up the necessary legal and political framework;
- 13 bodies with responsibility for nuclear safety issues;
- 30 research centres involved in the actual implementation of international commitments in the field of nuclear energy;
- Many representatives of the nuclear industry, civil society and public and private financial institutions.

The Conference was characterized by a fruitful dialogue, which should be continued.

Giving priority to training

"*We will create an International Nuclear Energy Institute that will include an International Nuclear Energy School. It will bring together the best teachers and researchers to provide very high quality education (...). The Institute will be an integral part of the international network of specialized Centres of Excellence now taking shape. We will set up the first Centre in Jordan.*"

(President of the French Republic, Paris Conference, 8 March 2010)

At a time when more and more countries wish to acquire nuclear energy capabilities, France, in accordance with the commitments it has made under article IV of the Non-Proliferation Treaty, is ready to respond to these expectations by making its recognized expertise available to any country which scrupulously observes all of its nuclear non-proliferation commitments, and in particular those required under the Treaty.

Far from being contradictory, the strengthening of the non-proliferation regime and the development of nuclear energy go hand in hand. As the Treaty itself says, the inalienable right of sovereign States to use nuclear energy for peaceful purposes pursuant to article IV is subject to strict compliance with the other provisions of the Treaty, particularly articles I and II. This is because the right to the peaceful uses of nuclear energy must not be exploited in order to use nuclear technologies, equipment or material for purposes contrary to the aims of the Treaty. The international community must make every effort to share the benefits offered by civil nuclear energy, while eliminating the risks of proliferation associated in particular with the fuel cycle.

That is why France hopes that the May 2010 Treaty Review Conference will provide an opportunity to reaffirm the major principles governing and facilitating the sustainable development of civil nuclear energy.

"*The responsible development of nuclear energy is a critical issue for the future of our planet. We have to work together to achieve a new nuclear governance based on a strengthened IAEA.*"

(President of the French Republic, Paris Conference, 8 March 2010)

IV. What France proposes, together with its European partners

- To assist countries in planning and assessing their various energy needs;
- To assure the responsible development of the peaceful uses of nuclear energy in the best safety, security and non-proliferation conditions;
- To actively support efforts to further develop multilateral fuel cycle mechanisms;
- To promote the highest non-proliferation, nuclear safety and security standards and most rigorous practices by assisting partners that want to set up appropriate regulatory, administrative and human environments;

- To encourage countries which have not done so to accede to all the most important relevant nuclear conventions, in particular in the fields of nuclear safety, physical protection and civil nuclear liability;
- To promote responsible management of spent fuel and nuclear waste, and to assist countries in planning waste management solutions, including at the regional level;
- To assist countries in setting up or reinforcing robust export control systems;
- To support IAEA assistance programmes and the IAEA nuclear security fund with funding and technical expertise;
- To support national, bilateral and international efforts to train the necessary skilled workforce;
- To seek to ensure the maximum appropriate transparency and access to information in the development of nuclear energy programmes;
- To promote nuclear applications in health and agriculture, in particular in cancer research in the developing world, hydrological applications, and assistance to developing countries to improve protection against radiation.

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Dismantling the ground-to-ground component

Working paper submitted by France

Elimination of the ground-to-ground component

France's ground-to-ground component consisted of mobile short-range missiles, together with strategic missiles located on the Plateau d'Albion.

As a result of changes in the strategic context, on 22 February 1996 France announced its decision to forego the ground-to-ground component of its nuclear deterrent.

Stages in the phase-out of the ground-to-ground component

1991-1992 decisions

- Early withdrawal of Pluton short-range missiles
- Production of Hadès short-range missiles ended and decision taken not to deploy them
- S45 strategic ground-to-ground missile programme (intended to replace the Plateau d'Albion S3D missiles) terminated

1996 decisions

- Decommissioning of Plateau d'Albion ground-to-ground missiles and closure of the site
- Final removal of the Hadès weapons system

The dismantling of the 30 Hadès mobile short-range missiles was completed in 1997, the dismantling of the 18 S3D strategic missiles in 1998.

Dismantling of Plateau d'Albion (1996-1998)

Some major constraints, namely security, respect for the environment, site conversion and consequences for the local community and economy, had to be taken into account in dismantling Plateau d'Albion, a complex operation that began on 16 September 1996.

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A large workforce and specialized equipment were used for this very specific worksite, which extended over almost 800 hectares. Dismantling the 18 launch areas required:

- Over 63,000 working hours
- The removal of more than 630 tons of material.

Each stage of the dismantling process was highly technical: for example, extracting each missile warhead required 162 different operations. After the nuclear warheads and the detonation device had been removed, the destruction of the missiles involved disposing of not only the missile bodies but also the fuel.

All sites, equipment and facilities that had come into contact with nuclear material were subject to non-contamination inspection and certification.

The denuclearization of Plateau d'Albion, at the rate of one missile a month, was completed on 25 February 1998. The total cost of dismantling the site was about 75 million euros.

Towards a treaty banning short- and intermediate-range ground-to-ground missiles

In keeping with the steps taken at the national level with the elimination of its national ground-to-ground component, France is engaged in vigorous efforts at the multilateral level to achieve disarmament. The President of the Republic has, for example, proposed the opening of negotiations on a treaty banning short- and intermediate-range ground-to-ground missiles (Cherbourg speech, 21 March 2008).

France's proposal has been incorporated within the disarmament action plan which was endorsed by the 27 heads of State and Government at the Council of the European Union in December 2008 and which the European Union is proposing with a view to the 2010 Non-Proliferation Treaty Review Conference.

The European Union proposes the opening of consultations on a treaty banning short- and intermediate-range ground-to-ground missiles.

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Dismantling of the Pacific Testing Centre

Working paper submitted by France

France is the only nuclear-weapon State to have closed and dismantled, in an irreversible manner, its nuclear testing centre.

Cessation of nuclear testing

In 1996, France definitively ceased its nuclear testing. It immediately decided to fully dismantle the Pacific Testing Centre and the atolls of Mururoa and Fangataufa, located in the South Pacific.

Dismantlement

The dismantlement process began in 1996: infrastructures were knocked down, buildings that were no longer functional or that were likely to deteriorate quickly were destroyed, and clean-up operations were carried out in order to eliminate all radiological risks. In 1998, the dismantlement of the Pacific Testing Centre was completed. France can no longer carry out nuclear testing, and is the only nuclear-weapon State to have dismantled its testing site in a transparent and irreversible manner.

Monitoring the atolls

In 1998, a mission of international experts under the aegis of the International Atomic Energy Agency (IAEA) visited the sites. The mission concluded that the atolls did not pose any radiological risk to the Polynesian populations nor any geomechanical risk, and that no particular remediation or monitoring was necessary. France has nonetheless decided to continue monitoring the sites.

Support for the Comprehensive Nuclear-Test-Ban Treaty and monitoring of nuclear testing

France was the first nuclear-weapon State, together with the United Kingdom, to sign the Comprehensive Nuclear-Test-Ban Treaty (24 September 1996) and to ratify it (6 April 1998). At the international level, it actively supports the universal ratification and entry into force of the Treaty at the earliest possible date. On 24 and

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25 September 2009, France and Morocco co-chaired the so-called "Article XIV Conference" with a view to facilitating the entry into force of the Treaty.

France has participated substantively in setting up a Treaty verification system with the establishment of 16 monitoring stations on national territory, and eight international stations under bilateral cooperation agreements. Together with its European partners, France finances activities in such areas as training and enhancing the performance of the verification regime, and has provided over 5 million euros in technical assistance to third countries since 2006.

Action taken by the European Union

The disarmament plan of action, adopted in December 2008 during the French Presidency of the European Union, proposes:

- the universal ratification of the Comprehensive Nuclear-Test-Ban Treaty and the completion of its verification regime
- the dismantling, as soon as possible, of all nuclear testing facilities, in a manner that is transparent and open to the international community

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Dismantling of plants for the production of fissile material for nuclear weapons

Working paper submitted by France

France is the only State to have closed and dismantled all of its facilities for the production of fissile material for nuclear weapons.

Production shut down

France ceased the production of fissile material for its nuclear weapons in 1992 (plutonium) and 1996 (highly enriched uranium). In 1996, it announced a moratorium on the production of these materials. At the same time, France decided to begin dismantling the plants concerned.

Production facilities

- Highly enriched uranium: the enrichment plant at Pierrelatte, which operated from 1964 to 1996
- Plutonium: produced in plutonium-producing G1, G2 and G3 reactors at Marcoule (1956-1984), then separated at the UP1 reprocessing plant at Marcoule, established in 1958 and shut down in 1997

Dismantlement of facilities

The dismantlement programme was launched immediately after production was shut down. This dismantlement is irreversible. It thus entails a considerable financial commitment and presents a challenge in terms of implementation and expertise.

Dismantlement phases and key figures

- Total of 6 billion euros, of which 2 billion have already been invested
- Pierrelatte: six years of preparation; work began in 2002; completion expected in 2010; 4,000 diffusers; 1,330 tons of diffusion barriers; 1,200 km of pipes and 20,000 tons of very-low-activity waste

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- Marcoule: the first phase of cleaning dismantling of G1, G2 and G3 has been completed; 4,000 tons of scrap metal moved to the very-low-level radioactive waste storage centre in Aube; second phase scheduled for 2020-2035; dismantlement of the UP1 plant began in 1997, scheduled to last until 2035

Transparency and international commitment

France organized visits to its facilities on 16 September 2008 for the representatives of more than 40 States members of the Conference on Disarmament, on 16 March 2009 for non-governmental experts and on 3 July 2009 for foreign journalists. France is the only nuclear-weapon State to have opened the doors of its former facilities for the production of fissile material for nuclear weapons to the international community.

The European Union disarmament plan of action

- Adopted in December 2008 under the French Presidency
- Calls for the immediate commencement of negotiations on a treaty banning the production of fissile material for nuclear weapons
- Calls for the immediate establishment of a moratorium on the production of such materials
- Calls for all concerned States to dismantle their production capacities